

Transitioning from research slave to research scientist: an ecologist's  
perspective on navigating the post-graduate landscape

Or

How to Find a Job!!



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# *Post hoc vs Post-Doc*

## *The Post hoc Fallacy*

*To incorrectly assume "A" is the cause of "B" just because "A" preceded "B".*

*e.g. "All Professors have Ph.D.'s, therefore getting a Ph.D. means you'll get a Professor job (right?)"*



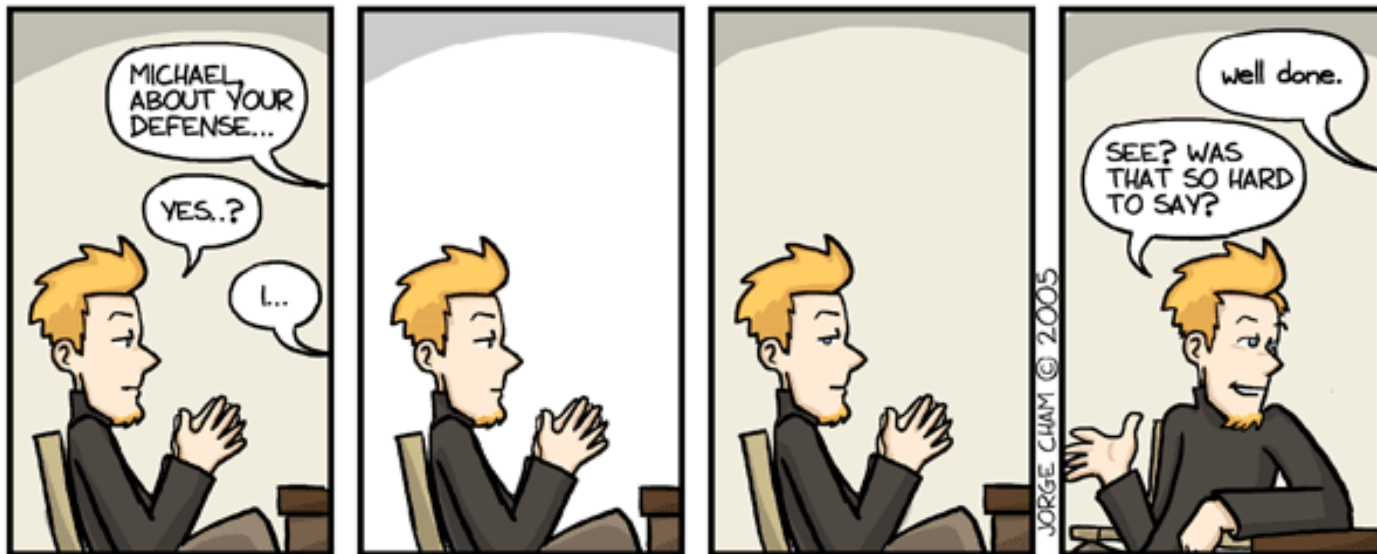
## *The Post-Doc Fallacy*

*To incorrectly assume you'll have a job just because you have a Ph.D.*

*e.g.  
"Now what??"*

# Outline

- Game Plan
- Information and Funding Sources
- Networking
- Postdoc Life
- Faculty Applications and Interviews



# Game Plan

1. Summer of last year
  - Set-up web portfolio: <http://web.unc.edu>
  - Go to conference present orally
  - Develop a project proposal (2-year scope)
  - Identify potential postdoc mentors



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## 3. Spring of last year

- Defend Dissertation
- Register again for summer conference – need to create a buzz!
- Look into backup plans



# Information Sources

- <http://mcglinn.web.unc.edu/postgradbiology>
- Postdoc Jobs:
  - ESA Physiological Ecology Section lists
  - Ecolog listserv
- Asst. Prof. and Other Jobs:
  - Central Job Wiki for all of Biology
  - ESA Physiological Ecology Section
  - Chronicle of Higher Ed

# Funding Sources

- Centers of Scholarship
  - NESCent, NIMBios, MBI, the list goes on...
- Post-doctoral fellowships
  - NSF, NIH, non-profit agencies
- Individual scholars/groups
  - Most common source of funding usually 1-3 years of funding
- Teaching Postdocs / Sabbatical Replacements





# Networking 101

1. Identify researchers who are relevant to you

2. Contact them via email

- Before a conference
- To pass on your recent pub



3. Contact them face-to-face

- Interact with invited speakers
- Introduce yourself to people at a conference
- Go out for dinner and drinks, unless you give talk next morning

# Networking 101

It's a small world, don't burn bridges, have fun  
be yourself



# Why Do A PostDoc?

- It's Exciting!
  - 2-year stint to study with another expert
- Many faculty jobs require PostDoc experience
- Great way to develop another dimension of your research
- Gives you time to publish more papers and look for a more permanent job

# Postdoc Research Proposals

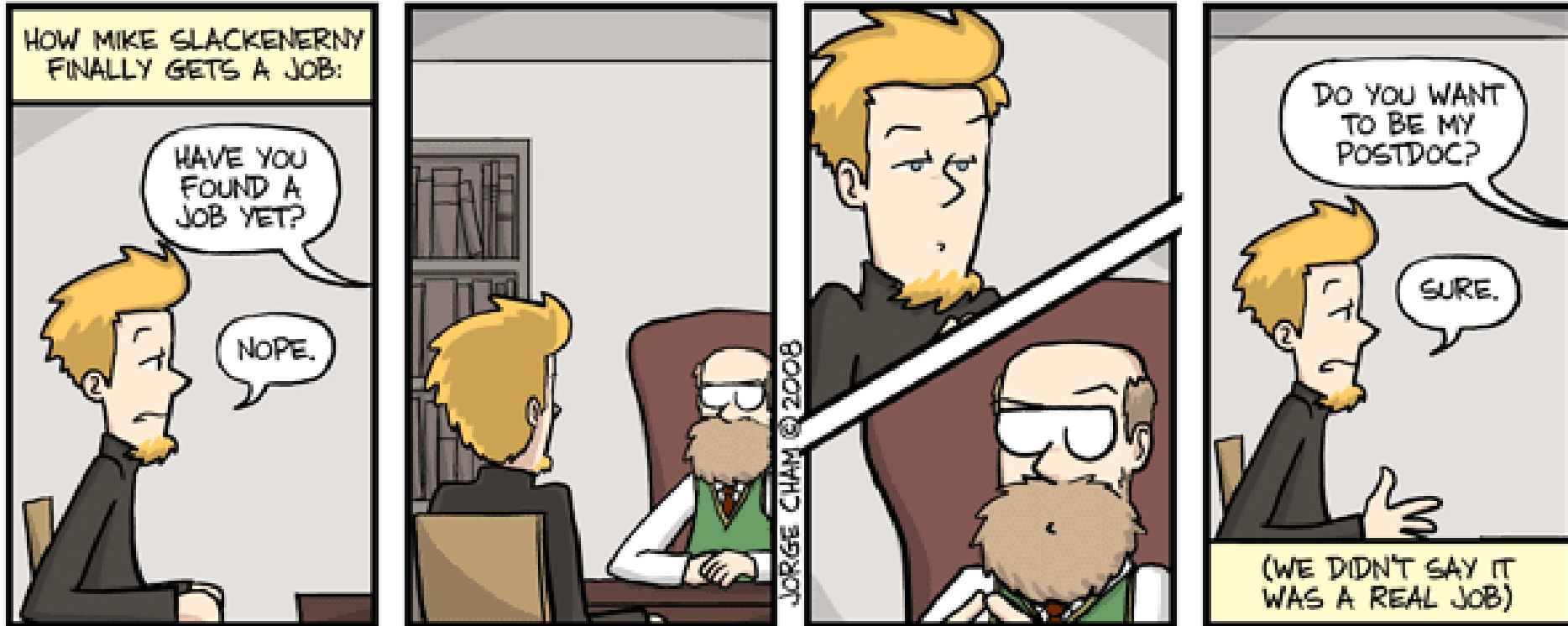
- Why is this important?
  - Could result in money, independence, and accolades
  - Forces you to develop concrete research plans
  - A tool for communicating with potential postdoc mentors
- Needs to be targeted
  - What is the granting agency looking for
  - What direction do you want to take your work
  - Should build off your current skills & help you develop new ones
- Look for help
  - See other successful proposals
  - Use a lab meeting as a forum for proposing your idea
  - Don't wait until the last minute to submit an NSF/NIH proposal!!



# PostDoc Interview

- Typically a phone interview
- Have a succinct blurb about your dissertation or each chapter if they wish to know more depth
- Emphasize your strengths and why you are interested in working with them
- Outline your broader goals as well as the specific project you would like to work on with them

# Try to Avoid the in House PostDoc



# Making the Most of your PostDoc

- 1<sup>st</sup> Year:
  - Submit any remaining dissertation chapters
  - If invited, give talks
  - Keep pulse of job market
  - Put together your job packet
- 2<sup>nd</sup> Year:
  - Submit, Submit, Submit!
  - Work at gaining experience in areas where you are lacking (e.g., teaching experience)

# Expectations of PostDocs

- Different than for graduate students
  - You're a Big Kid Now!!
- Expected to be a mentor for others in the lab and colleague (on an intellectual level) with your boss
- Typically expected to be in the lab 9-5, but pull long hours when needed
- Dress is a bit less casual, but this really depends on your lab and department



# PostDoc-Mentor Relationship

- After the initial tingling sensations of getting going with a new person have worn off its time to get down to work.
- The keys
  - Good Communication & Clear Expectations
    - Use Lab wiki to post results
    - Weekly 1-on-1 meetings / Semester Progress Reports
  - Focus and Follow-Through
    - Don't change project ideas too quickly but don't beat a drum that your boss is clearly not interested in



# Faculty Application Packet

- Definitely consists of:
  - Cover letter
  - CV
  - Research Statement
  - Teaching Philosophy
  - 3 letters of recommendation
- May also consist of:
  - Relevant Publications
  - Evidence of Teaching Effectiveness
  - Other online forms



# Cover Letter

- Make it Formal



THE UNIVERSITY  
*of* NORTH CAROLINA  
*at* CHAPEL HILL

DEPARTMENT OF BIOLOGY  
COKER HALL  
CAMPUS BOX 3280  
CHAPEL HILL, NC 27599-3280

T 919.962.2077  
F 919.962.1625  
biology.unc.edu

1 September 2010

Dr XXX XXXXXX  
Chair, Appointments Committee  
School of Biology  
University of XXXXXXXX  
Street Address

Dear Dr XXXXX,

I am writing to apply for the XXXXX in Biology at the University of XXXX. I received my Ph.D. in plant sciences from Oklahoma State University in July 2009, and I am currently a postdoctoral research associate in the Department of Biology at the University of North Carolina in Dr. Allen Hurlbert's laboratory. In this letter I detail my motivations and qualifications for this position. Additional details on my experience, goals, and philosophy of research and teaching can be found in the accompanying statements and curriculum vitae.

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- End indicating what is included in your application and a list of your 'letter writers'

# CV Grooming

- Most important pieces of information:
  - 1) Publications and Manuscripts
  - 2) Awards and Grants
  - 3) Teaching Experience
  - 4) Academic Training
  - 5) Other scholarly activity and outreach
- Keep it clean and neat
- Avoid filler





# Research Statement

- 2 pages single-spaced
- Emphasize:
  - Questions
    - What is the ultimate overarching goal of your research?
    - Why is this important
  - Toolbox
    - What methods do you use in your research
    - Analytical models, experiments, bioinformatics, meta-analyses, or how a combination of tools is best
  - Your strengths
    - Demonstrate how you are a leader in your field
    - Cite your research to back up your statements
    - Collaborators that you are working with
    - Funding sources you have procured



# Research Statement

- Don't Underestimate the Power of a Table!

Influences on community structure	Research approaches		
	Macroecology analyses	Field studies	Models and simulations
1. Scale dependence & environmental heterogeneity	avian patterns of richness and turnover	plant species-time-area relationship (STAR); plant species turnover in response to soil heterogeneity	analytical STAR model; fractal simulations of environmental landscape heterogeneity
2. Biotic interactions	avian patterns of richness and turnover	—	community thinning effects on richness-biomass relationship
3. Natural & human-mediated disturbance	—	plant responses to fire and grazing; avian responses to tornado	—

# Teaching Philosophy

- Speak from experience
  - Statements like: “In **my** classrooms **I** use...” are better than “I think a teacher should be...”
- Don’t be careless



# Teaching Philosophy

- If lacking formal teaching experience draw upon your experiences mentoring groups of students or younger scientists
  - Use your postdoc to get some teaching experience even if its just guest lecturing or helping on a field trip



# Letters of Recommendation

- 1) how well this person can represent you and
  - 2) how their letter will be perceived
- Have a 4th back-up letter writer in store in case they ask for an additional letter or someone flakes on you
  - Don't feel guilty asking for letters after they have been written

# Faculty Phone/Skype Interview

- Typically will be with between 4 and 8 people should be ~ 45 minutes
- Why  $X$  school?
- What is your research vision?
- Don't you need  $Y$  to answer that question not  $Z$ ?
- You study  $Q$ , we don't have  $Q$  here what are you going to study?
- Describe a course you would teach?
- How will you fund your research?

# Faculty Interview

- Typically a multi-day affair
- Get some nice clothes
- Prepare Research Talk
- May need to prepare Teaching Talk
- Research the Department! Especially those in your field
- Be confident, excited, and attentive, but don't ooze your enthusiasm to the nth degree



# Faculty Interview

- You are always “on”!
  - The interview does not stop until you arrive back at your home
- Prepare and practice a 60 second description of your research
- Prepare questions for:
  - 1) Dean, 2) Dept. Head, 3) Full Profs, 4) Asst. Profs, 5) Grad Students
- Mail thank-you cards when it's all over.



# Research Talk ~ 45 min.

- Introduction – 10 minutes
  - Get them excited about who you are
  - Introduce why your work is important
- Meat – 25 minutes
  - Typically 2 cohesive and complete studies
- Future Directions – 10 minutes
  - Broader direction you are taking your work
  - Example of a specific study you would start on after joining their faculty

# Interactive Portion of the Talk!

- You have 60 seconds to ...
  - Shake hands with a neighbor
  - Introduce yourself
  - Describe your research in non-technical terms
- We will then switch



# Now Give Feedback

- Rate the handshake
- How was their
  - Confidence
  - Enthusiasm
- Can you describe:  
what they do research on?

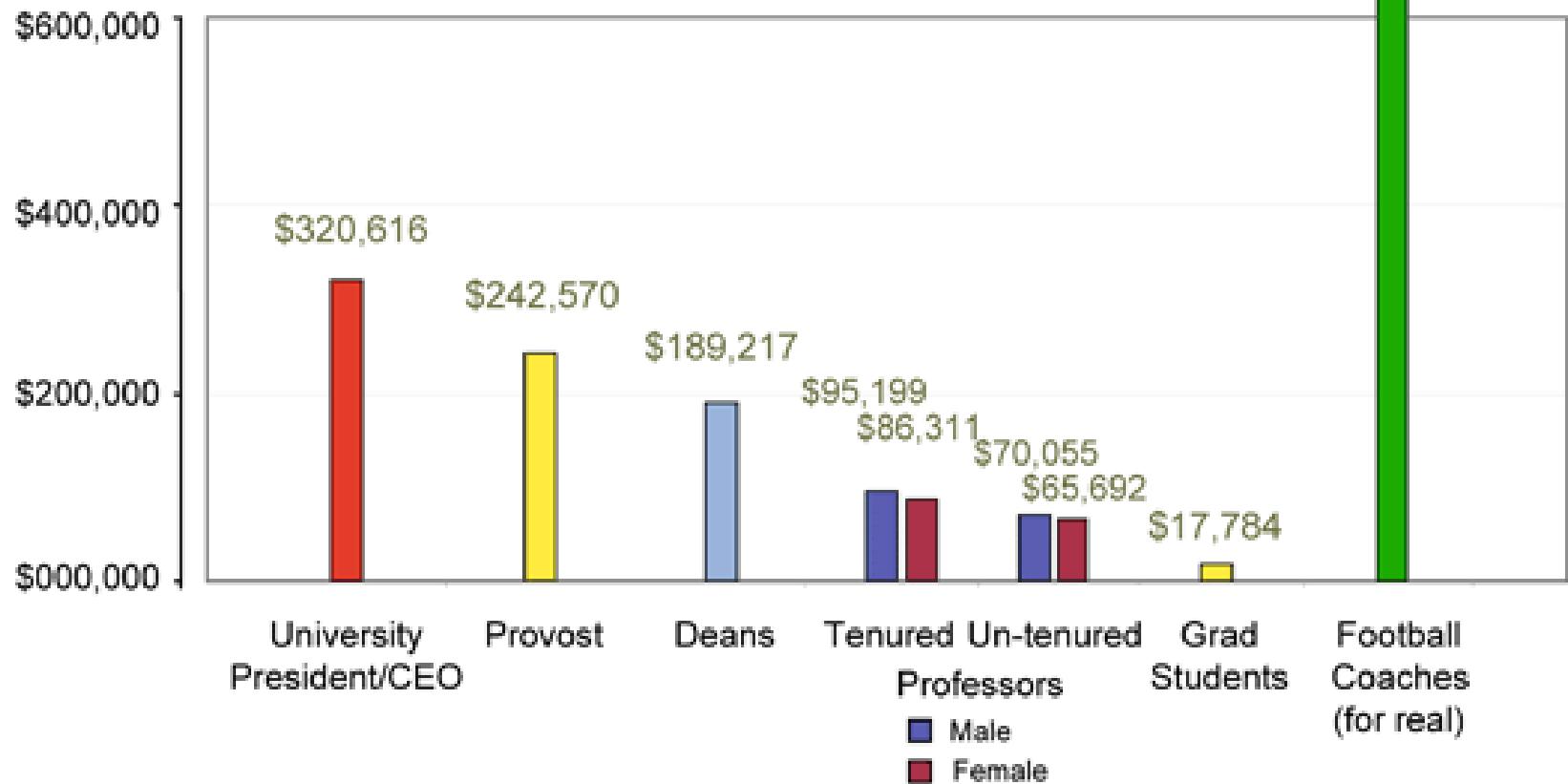


Thanks! Questions?



# "Academic" Salaries

Actual average and median salaries at U.S. Doctoral-granting Universities



Notes: Administrator figures are median salaries, the rest are averages. All figures in 2008 dollars. Sources: College and University Professional Association